SURGERY

UNDER THE CHARGE OF

T. TURNER THOMAS, M.D.,
ASSOCIATE PROFESSOR OF APPLIED ANATOMY AND ASSOCIATE IN SURGERY IN THE UNIVERSITY OF PENNSYLVANIA; SURGEON TO THE PHILADELPHIA GENERAL AND NORTHEASTERN HOSPITALS AND ASSISTANT SURGEON TO THE UNIVERSITY HOSPITAL.

Hypophyseal Duct Tumors.—Duffy (*Annals of Surgery*, 1920, lxxii, 532 and 725) says, in concluding a very excellent article on this subject, although there are embryological possibilities for growth of squamous epithelial neoplasms between the pharynx and the sella turcica, the great majority of such tumors develop from squamous epithelial embryonic rests of the hypophyseal duct either in the infundibulum or beneath the upper surface of the anterior lobe of the hypophysis. Of either origin the tumor usually presents above the sella. In view of the fact that a majority of these tumors are suprasellar in position from the beginning and that nearly all early assume this position, it appears that they are especially suitable surgically for an intracranial approach. In tumors which arise beneath the capsule of the anterior lobe the latter becomes flattened out below and a transsphenoidal approach may destroy the entire anterior lobe of the hypophysis. The tumors derived from embryological remnants of the hypophyseal duct are quite different in structure from those derived from Rathke's pouch or cleft (between the anterior and posterior hypophyseal lobes). From the duct reliqui develop papillary squamous epithelial adamantinomatous tumors; whereas, from Rathke's pouch or the cleft develop simpler cysts lined by a single layer of ciliated cylindrical epithelium. The hypophyseal duct tumors histologically may be divided into three groups. Group I is that of the papillary cyst or intracystic papilloma which is histologically the most benign example of hypophyseal duct tumors. Group II includes the uncalcified or calcified adamantinomas (solid or cystic), the rarer tumors which closely resemble the basal epithelioma of skin, and the more complicated adamantinomas, the "autochthonous teratomas" of Ewing. The tumors of this group may show criteria of local malignancy, but do not metastasize. Group III comprises a very rare group of cases which show all the earmarks of malignant spinal-cell carcinoma and may metastasize extensively to the cervical lymphatics. The frequent occurrence of calcification in hypophyseal duct tumors is an important diagnostic fact. At variance with the statement of Jackson (1916) that roentgenography is usually negative, in each adamantinomatous tumor described by the writer the roentgenogram shows a suprasellar calcified nodule. The rarity of such calcified shadows in tumors of other types (adenomas, endotheliomas, etc.) makes such nodular shadows almost pathognomonic. The occurrence of bone in hypophyseal duct adamantinomas is not due to the presence of a congenital osseous anlage but is a result of activity on the part of the stroma, apparently excited by the presence of calcium salts which have been deposited in the necrotic stratified epithelium. The mechanism of osseous change is apparently similar to that described by Nicholson for the same phenomenon in calcified cutaneous epitheliomas. Hypophyseal duct tumors of the infundibulum not infrequently break into the third ventricle. To the contrary, the tumors of the ependyma or choroid plexus of the third ventricle are very rarely present in the suprasellar region; this is explained by spread of the growth along the intraventricular paths of least resistance. During operations on suprasellar cysts in intimate contact with the floor of the third ventricle microscopic demonstration of squamous epithelium from the lining of the cyst will assure the surgeon that the cyst (or solid tumor) originated below the ventricle. A pathological fact of importance for the surgeon to appreciate is the intimate and delicate relation of such cysts with the floor of the ventricle, from which they are frequently separated only by a very thin membrane. The very frequent occurrence of the clinical syndrome of dystrophia adiposogenitalis (Frölich) in patients suffering with hypophyseal duct (squamous epithelial) tumors makes the pathological findings in the genital organs of two individuals of particular interest. In the uterus of a twenty-year-old girl there was an atrophic endometrium, almost equal to that of the senile type, associated with cessation of the process of ovulation (ovaries). The testes of a thirty-five-year-old man showed a marked atrophy of the spermatogenous epithelium.

Management of the Cervical Stump and the Round and Broad Ligaments when Performing Supravaginal Hysterectomy.—Bissel (*Surg., Gynec. and Obst.*, 1920, xxxi, vi, 578), says if the action of the round ligaments, when these ligaments are anchored to the cervical stump, effects a change in the position of the cervix, then this change of position must be toward the symphysis and from the coccyx, and as the normal position of the cervix is in the immediate region of the coccyx, any marked change of its position toward the symphysis constitutes a displacement. If, when the round ligaments are anchored to the normally posed cervix, the position of the cervix after operation is found maintained, it is proof that the anchored round ligaments have had no influence upon the position of the cervix, as the direction of this influence, if any, must be toward the symphysis. A normal fascial diaphragm independently maintains the cervix in a normal position. Its action is constant and its resistance greater than that of the round ligaments, so that the influence of the anchored round ligaments upon the cervix must be *nil* when the fascial pelvic diaphragm is normal. If the posterior area of the fascial diaphragm is stretched by a retroposed corpus or tumor in the cul-de-sac of Douglas so as to advance the cervix toward the symphysis, shortening of the uterosacral or posterior ligaments is a more logical procedure than anchoring of the round ligaments to the cervical stump. If the entire fascial diaphragm has been injured sufficiently to permit of the cervix advancing and descending toward the vulva and an intra-abdominal removal of the corpus is deemed advisable, then the corpus should be removed without reference to the position of the cervix and the prolapse of the cervix with the vaginal vault corrected subsequently by lapping the fascia of the anterior vagi-